
**Monopotassium phosphate (technical grade) fertilizer —
Specification**



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Foreword

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Monopotassium phosphate (technical grade) fertilizer — Specification

1 Scope

This Draft African Standard specifies requirements, sampling and test methods for Monopotassium phosphate fertilizer, technical grade.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AOAC 969.02, *Phosphorus (total) in fertilizers — Alkalimetric quinolinium molybdophosphate method*

AOAC 993.31, *Phosphorus (available) in fertilizers — Direct extraction method*

AOAC 2006.03, *Arsenic, cadmium, cobalt, chromium, lead, molybdenum, nickel, and selenium in fertilizers — Microwave digestion and inductively coupled plasma-optical emission spectrometry*

EN 12048, *Solid fertilizers and liming materials — Determination of moisture content — Gravimetric method by drying at 105±2 °C*

ISO 5317, *Fertilizers — Determination of water-soluble potassium content — Preparation of the test solution*

ISO 7409, *Fertilizers — Marking — Presentation and declarations*

ISO 8157, *Fertilizers and soil conditioners — Vocabulary*

ISO 10390, *Soil quality — Determination of pH*

ISO 14820-1, *Fertilizers and liming materials — Sampling and sample preparation — Part 1: Sampling*

ISO 14820-2, *Fertilizers and liming materials — Sampling and sample preparation — Part 2: Sample preparation*

ISO 17318, *Fertilizers and soil conditioners — Determination of arsenic, cadmium, chromium, lead and mercury contents*

3 Terms and definitions

For the purposes of this document, the following terms and definitions in ISO 8157 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at: <http://www.iso.org/obp>

— IEC Electropedia: available at: <http://www.electropedia.org/>

4 Requirements

4.1 Description

The fertilizer shall be free flowing, in the form of granules, pellets, crystals, powder, or prills, free from any foreign matter and shall not cake on storage.

4.2 Physical requirements

The fertilizer product shall be fully soluble in water.

4.3 Chemical requirements

The fertilizer shall comply with the requirements given in Table 1 when tested with the test methods specified therein.

Table 1 — Requirements for monopotassium phosphate fertilizer

S/N	Characteristic	Requirement	Test method
i.	Available phosphate content, P_2O_5 , % m/m, min.	51.5	AOAC 969.02 AOAC 993.31
ii.	Potassium content, as K_2O , % m/m, min	33.5	ISO 17319 EN 15477
iii.	pH (1% solution),	4.0-5.0	ISO 10390
iv.	Moisture, % m/m, max	0.5	EN 12048
v.	Water insolubles, %, m/m, max	0.5	ISO 15958 ISO 15959 ISO 5317

4.4 Metal contaminants

The presence of heavy metal contaminants shall not exceed the limits stipulated in Table 2 when tested with the methods specified therein.

Table 2 — Heavy metal contaminants

S/N	Parameter	Maximum limits, (mg/kg)	Test method
i.	Arsenic, As	20,0	ISO 17318
ii.	Cadmium, Cd	30,0	ISO 17318
iii.	Mercury, Hg	0,1	ISO 17318
iv.	Selenium, Se	1,0	AOAC 2006.03
v.	Lead, Pb	30,0	ISO 17318
vi.	Chromium, Cr	500,0	ISO 17318

5 Packaging

The fertilizer shall be packed in clean, non-defective and appropriate containers that will protect it integrity during handling, transportation and storage.

NOTE The product may be also supplied in bulk containers.

6 Labelling

In addition to the labelling requirements of ISO 7409, each container of mono potassium phosphate fertilizer shall be legibly and indelibly marked in accordance with Globally Harmonized System (GHS) and with the following particulars.

- a) name of the fertilizer, as “mono potassium phosphate fertilizer technical grade”;
- b) name, address and physical location of the manufacturer/packer/importer;
- c) country of origin/manufacture;
- d) date of manufacture
- e) the form in which the nutrients are present.
- f) expiry date or best before date
- g) the content net weight;
- h) batch/lot number;
- i) instruction for handling, use and storage.

7 Sampling

Sampling and sample preparation shall be carried out in accordance with ISO 14820-1 and ISO 14820-2, respectively.

Bibliography

KS 2426:2012, *Monopotassium phosphate (technical grade) fertilizer — Specification*

